

Amendment to the Claims:

The following listing of claims replaces all previous versions and listings of claims:

1. (Currently amended) A computer-implemented method for providing a dynamic multi-dimensional commodity modeling process, comprising:

creating a commodity hierarchy data structure comprising:

at least one top level node; and

at least one leaf node dependent upon said at least one top level node;

assigning attributes to nodes in said hierarchy, said attributes sharing uniform characteristics;

selectively assigning at least one dimensional attribute to a node; wherein dimensional attributes includes at least one of:

a performance tolerance;

a noise filter;

an oscillation thresholds or trends;

consecutive trending; and

negative performance threshold; and

creating a commodity tree that includes the commodity hierarchy data structure, assigned attributes, and selectively assigned dimensional attributes, the commodity tree used in invoking an analysis based upon said at least one dimensional attribute;

wherein dependent nodes inherit dimensional attributes assigned to corresponding upper level nodes.

2. (Previously presented) The computer-implemented method of claim 1, further comprising:

at least one secondary level node dependent on said at least one top level node;

and

at least one leaf node dependent on said at least one secondary level node.

3. (Previously presented) The computer-implemented method of claim 1, wherein said attributes are dynamically alterable during instantiation of said multi-dimensional commodity modeling process.

4. (Previously presented) The computer-implemented method of claim 1, wherein said dimensional attributes are dynamically alterable during instantiation of said multi-dimensional commodity modeling process.

5. (Previously presented) The computer-implemented method of claim 1, wherein said invoking an analysis based upon said at least one dimensional attribute includes determining performance patterns related to a constituent.

6. (Previously presented) The computer-implemented method of claim 2, wherein said at least one secondary level node comprises at least one nested sub-commodity.

7. (Previously presented) The computer-implemented method of claim 1, wherein said at least one dimensional attribute is selectively assignable to at least one of:

a top level node; and

a leaf level node.

8. (Previously presented) The computer-implemented method of claim 2, wherein said at least one dimensional attribute is selectively assignable to at least one secondary level node.

9. (Currently amended) A system for implementing a dynamic multi-dimensional commodity modeling process, comprising:

a quality management system; and

quality management components executing via the quality management system,
the quality management components performing:

creating a commodity hierarchy data structure comprising:

at least one top level node; and

at least one leaf level node dependent upon said at least one top level node;
assigning attributes to nodes in said hierarchy, said attributes sharing uniform characteristics;

selectively assigning at least one dimensional attribute to a node;
wherein dimensional attributes includes at least one of:

a performance tolerance;
a noise filter;
an oscillation thresholds or trends;
consecutive trending; and
negative performance threshold; and

creating a commodity tree that includes the commodity hierarchy data structure, assigned attributes, and selectively assigned dimensional attributes, the commodity tree used in invoking an analysis based upon said at least one dimensional attribute;

wherein said at least one dimensional attribute is inherited down to corresponding nodes in said commodity hierarchical structure.

10. (Previously presented) The system of claim 9, further comprising:

at least one secondary level node dependent on said at least one top level node;

and

at least one leaf node dependent on said at least one secondary level node.

11. (Previously presented) The system of claim 9, wherein said uniform attributes are dynamically alterable during instantiation of said multi-dimensional commodity model.

12. (Previously presented) The system of claim 9, wherein said at least one dimensional attribute is dynamically alterable during instantiation of said multi-dimensional commodity model.

13. (Previously presented) The system of claim 9, wherein said analysis includes determining performance patterns related to a constituent.

14. (Previously presented) The system of claim 10, wherein said at least one secondary level node comprises at least one nested sub-commodity.

15. (Previously presented) The system of claim 9, wherein said at least one dimensional attribute is selectively assignable to at least one of:

a top level node; and

a leaf level node.

16. (Previously presented) The system of claim 10, wherein said at least one dimensional attribute is selectively assignable to said at least one secondary level node.

17. (Previously presented) The system of claim 9, wherein said uniform attributes comprise at least one of:

sampling criteria;

period definition;

history definition; and

type of measure.

18. (Previously presented) The system of claim 17, wherein said sampling criteria includes at least one of:

a product type;

an operations;

a step; and

a source.

19. (Previously presented) The system of claim 17, wherein said period definition includes a unit of time to apply a specified analytic.

20. (Previously presented) The system of claim 17, wherein said history definition includes a number of periods to be applied to a specified analytic.

21. (Previously presented) The system of claim 17, wherein said type of measure includes a type of analytic to be applied, said type of analytic including a Shewhart Control

Chart.

22. (Cancelled)

23. (Previously presented) The system of claim 9, wherein said performance tolerance defines a standard deviation from a mean.

24. (Previously presented) The system of claim 9, wherein said noise filter defines a statistically significant sample size for a period.

25. (Previously presented) The system of claim 9, wherein said oscillation thresholds or trends define unwanted change oscillating around a mean within limits.

26. (Previously presented) The system of claim 9, wherein said negative performance threshold defines absolute value limits.

27. (Withdrawn) A quality management system for utilizing dynamic multi-dimensional commodity modeling, comprising:

a data collection component operable for collecting raw data;

a dynamic multi-dimensional commodity model component;

a commodity constituent model generated by said dynamic multi-dimensional commodity model component;

a closed loop/corrective action component operable for resolving nonconformance issues resulting from analysis;

an analytic engine in communication with said data collection component, said multi-dimensional commodity model component, and said closed loop/corrective action component;

wherein said analytic engine performs:

receiving said raw data from said data collection component;

receiving said commodity constituent model;

performing analytics on said raw data according to rules defined by said commodity constituent model; and

if said performing analytics results in a nonconformance,
transmitting nonconformance data to said closed loop/corrective action component.

28. (Withdrawn) The quality management system of claim 27, wherein said dynamic multi-dimensional commodity model component performs:

creating a commodity hierarchy data structure comprising:

at least one top level node; and

at least one leaf node dependent upon said at least one top level node;

assigning attributes to nodes in said hierarchy, said attributes sharing uniform characteristics; and

selectively assigning at least one dimensional attribute to a node operable for invoking an analysis based upon said at least one dimensional attribute;

wherein dependent nodes inherit dimensional attributes assigned to corresponding upper level nodes.

29. (Currently amended) A storage medium encoded with machine-readable computer program code for providing a dynamic multi-dimensional commodity modeling process, the storage medium including instructions for causing a computer to implement a method, comprising:

creating a commodity hierarchy data structure comprising:

at least one top level node; and

at least one leaf node dependent upon said at least one top level node;

assigning attributes to nodes in said hierarchy, said attributes sharing uniform characteristics;

selectively assigning at least one dimensional attribute to a node; wherein dimensional attributes include at least one of:

a performance tolerance;

a noise filter;

an oscillation thresholds or trends;
consecutive trending; and
negative performance threshold; and

creating a commodity tree that includes the commodity hierarchy data structure, assigned attributes, and selectively assigned dimensional attributes, the commodity tree used in invoking an analysis based upon said at least one dimensional attribute;

wherein dependent nodes inherit dimensional attributes assigned to corresponding upper level nodes.

30. (Original) The storage medium of claim 29, further comprising instructions for causing said computer to implement:

at least one secondary level node dependent on said at least one top level node;
and

at least one leaf node dependent on said at least one secondary level node.

31. (Original) The storage medium of claim 29, wherein said attributes are dynamically alterable during instantiation of said multi-dimensional commodity modeling process.

32. (Original) The storage medium of claim 29, wherein said dimensional attributes are dynamically alterable during instantiation of said multi-dimensional commodity modeling process.

33. (Original) The storage medium of claim 29, wherein said invoking an analysis based upon said at least one dimensional attribute includes determining performance patterns related to a constituent.

34. (Original) The storage medium of claim 30, wherein said at least one secondary level node comprises at least one nested sub-commodity.

35. (Original) The storage medium of claim 29, wherein said at least one dimensional attribute is selectively assignable to at least one of:

a top level node; and

a leaf level node.

36. (Original) The storage medium of claim 30, wherein said at least one dimensional attribute is selectively assignable to at least one secondary level node.

37. (Previously presented) The computer-implemented method of claim 1, wherein said performance tolerance defines a standard deviation from a mean, said noise filter defines a statistically significant sample size for a period, said oscillation thresholds or trends define unwanted change oscillating around a mean within limits, and said negative performance threshold defines absolute value limits.